

REMARKS

This amendment responds to the Office Action which was mailed on March 2, 2004. In light of the arguments and remarks set forth below, it is respectfully submitted that Claims 1-7, 10-12, and 17-20 are in condition for allowance. Applicant requests a favorable reconsideration of this application in light of the remarks set forth below which constitute a full and complete response to the outstanding Office Action.

Applicant appreciates withdrawal of the previous rejection of Claims 1 and 17 under 35 U.S.C. § 103(a) as unpatentable over Ikonen in view of Lane. Upon further examination, however, Claims 1, 3, 4, 6, 7, 10, 11, 17, 19, and 20 have now been rejected under 35 U.S.C. § 103(a) as being unpatentable over Gallet, U.S. Pat. No. 4,817,596.

It has been asserted that Gallet teaches all of the elements of Claim 1 and Claim 17, the two independent claims in the case. It is respectfully submitted that Gallet does not actually teach, disclose, or even suggest all of the claim limitations of Claims 1 and 17 and that, therefore, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

More particularly, it has been asserted that Gallet teaches a face protection shell including "an adjustable head harness" as shown in the Figures. However, it is respectfully submitted that Gallet does not teach an adjustable head harness as a component of the face protection shell or mask. Rather, Gallet discloses a two-point spring and hook system which attaches the mask (face protection shell) to the helmet of the user. The two-point hook and spring system can then be tightened to secure the mask to the face of the user. The face protection shell or mask of Gallet does not teach or suggest the adjustable head harness as claimed by applicant. Gallet's device and applicant's invention differ in a very fundamental way. Applicant's face protection shell

(or mask) includes its own adjustable head harness which is capable of engaging the back of the user's head to thereby adjustably secure the face seal and nose cup assembly to the user's face. This adjustable harness is included as an element of the face protection shell in Claims 1 and 17, and is described on page 10, lines 1-9, of the specification. In contrast, the face protection shell or mask of Gallet does not include a head harness to secure the mask to the user's face, but rather only attaches to the sides of the helmet through the two-point hook and spring system. In Gallet, only the helmet (not the mask) includes a head harness to engage the head of the user, but it is not part of the mechanism for securing the mask to the face of the user, it merely supports the helmet on the user's head.

It should be recognized that applicant's have designed a modular helmet-mask assembly that addresses a long desired need to provide both helmet and face mask protection while maintaining a face seal that provides a very high protection factor required for military personnel operating in a chemical or biological warfare environment. It does this by including an internal harness system as part of the mask which seals the mask (face protection shell) to the face of the user, and lets the helmet system be engaged with the mask in a fashion that will not effect the seal after the face protection shell is attached to the helmet and the helmet stabilized. While many helmets provide crash and ballistic protection, applicants are not aware of any that provide internal chemical-biological protection without the use of some external means of forced blown filtered air.

In fact, the approach used by Gallet for integrating a mask and helmet shell has been used in the past in a number of integrated helmet-mask projects. Failure of these

systems to achieve the protection levels required for chemical-biological protection ultimately lead to applicant's invention. Attaching a mask to a helmet in a manner described by Gallet is suitable for the low levels of protection previously needed by police and firefighters. Commercial standards require a 50:1 protection factor for negative pressure respirators. Military chemical-biological protection requirements mandate a protection factor of at least 10,000:1. Achieving these high levels of protection in a negative pressure system requires the use of a multi-point suspension. Gallet cannot achieve these high levels of protection because the seal is being pushed onto the face with a two-point attachment system which is inadequate to achieve a uniform seal distribution on the face. This uneven distribution of the seal not only provides inadequate protection, but can also create significant discomfort for the wearer thereby limiting sustained operations.

In addition, engagement of the mask and helmet shell as required for modular integration must not interfere with the sealing quality of the mask. The Gallet system uses blocks to limit ratcheting the mask facepiece. This approach prevents the mask seal from properly engaging the wearer's face unless the head is precisely aligned in the helmet shell prior to engagement of the mask facepiece. As a result, a custom fit operation must be performed in order to achieve even the low levels of protection offered by this design.

In contrast, applicant's design provides a high, military level, protection factor because the mask (face protection shell) is sealed to the face using an adjustable head harness which engages the back of the wearer's head and is preferably connected to the mask facepiece, as reflected in Claim 1. In addition, Claim 17 clearly recites a method

for donning the mask-helmet assembly such that an effective seal is maintained even after the helmet is engaged to the mask. Applicant's invention also provides for an adjustment pad at the back of the helmet to better position the helmet on the user's head. Gallet does not teach, disclose, suggest or provide motivation for the applicant's invention as recited in Claims 1 and 17. Of course, Claims 2-7 and 10-12 are dependent from Claim 1, and Claims 18-20 are dependent from Claim 17, and are further limiting thereto. Therefore, these claims should also be in condition for allowance.

It should be noted that Lane was previously relied on to teach a common head harness for adjusting fit. However, it should be recognized that Lane teaches a facepiece or mask harness which only attaches to the helmet's headband assembly or suspension system. It does not directly interface with the wearer's head to provide a highly effective seal for the mask. In addition, Lane teaches an external filtration system for providing filtered air. In contrast, applicant's invention includes a mask having an internal head harness which allows the seal of the helmet system to "float" in a fashion so that the seal will not be affected after the face-protection assembly is engaged on the helmet and the helmet is stabilized. It should be clear that Lane does not teach or suggest the modular helmet-mask assembly having an integrated gas mask filtration and face seal for the wearer, as recited in Claims 1 and 17, and can not be combined with Gallet to do so.

It is respectfully submitted that since the elements of Claims 1 and 17 are not taught, disclosed, or even suggested by the teachings of Gallet or the prior art previously cited, nor is any motivation provided for the claimed elements of applicant's invention, Claims 1 and 17 should be considered patentable and in condition for allowance. Moreover, since Claims 2-7 and 10-12 are directly or indirectly dependent from Claim 1

and are further limiting thereto, and since Claims 18-20 are directly dependent from Claim 17 and are further limiting thereto, Claims 2-7, 10-12, and 18-20 are also patentable and in condition for allowance.

In summary, Claims 1-7, 10-12, and 17-20 remain in the case and based on the foregoing arguments should not be considered obvious over the prior art cited. Accordingly, it is respectfully submitted that these claims are patentable and in condition for allowance. Early reconsideration and withdrawal of the rejections is earnestly solicited, as is allowance of the claimed subject matter.

Respectfully submitted,

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DATE

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